

American DJ® TRI IMAGE



User Instructions

American DJ®
4295 Charter Street
Los Angeles, CA. 90058
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Tri Image™

General Introduction

Introduction: Thank you for purchasing the American DJ® Tri Image™. The Tri Image™ is a unique three color, two channel, DMX intelligent, laser effect that creates different patterns. This unit can be used as a stand alone, sound-active unit or in a Master/Slave configuration. The unit can also be controlled via DMX controller. The unit's sound sensitivity may be adjusted by a sensitivity adjustment on the back of the unit. The unit may be mounted in either a horizontal or vertical position. For a dramatic laser show use several Tri Images™ together.

Unpacking: Every Tri Image™ has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect the unit for any damage and be sure all accessories necessary to operate the unit have arrived intact. In the event damage has been found or parts are missing, please contact our toll free customer support number for further instructions. Please do not return the unit to your dealer without first contacting customer support.

Customer Support: American DJ® provides a toll free customer support line, to provide set up help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at www.americandj.com for any comments or suggestions. *For service related issue please contact American DJ®.* Service Hours are Monday through Friday 9:00 a.m. to 5:00 p.m. Pacific Standard Time.

Voice: (800) 322-6337

Fax: (323) 582-2610

E-mail: support@americandj.com

To purchase parts online visit <http://parts.americandj.com>

Warning! To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

Caution! There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, doing so will void your manufactures warranty. In the unlikely event your unit may require service please contact American DJ customer support.

PLEASE recycle the shipping carton whenever possible.

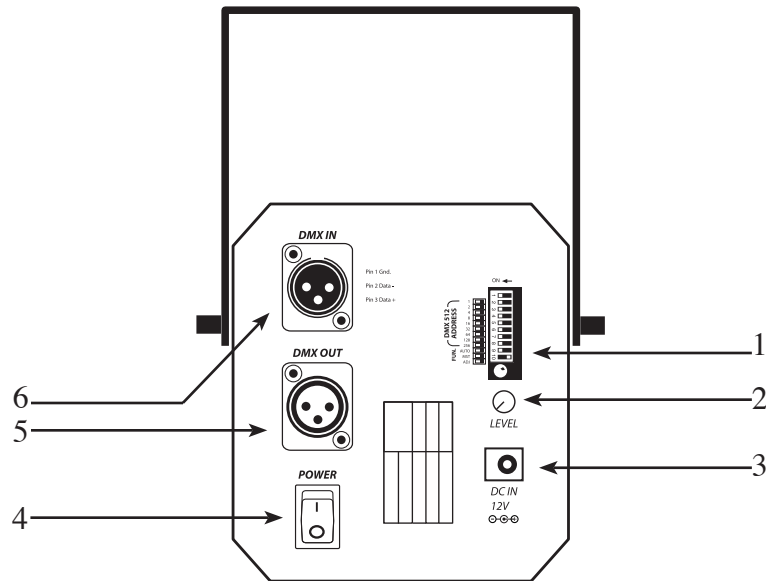
Please carefully read and understand the instructions in this manual thoroughly before attempting to operate this unit. These instructions contain important safety information regarding the use and maintenance of this unit. Please keep this manual with the unit, for future reference.

- 4.9mW Red and Green Laser Diodes
- 3 Laser Colors (Red and Green combine to make Yellow)
- Built-In Hanging Yoke
- Sound Active with Internal Microphone
- 50 Patterns
- 800 Effects
- Audio Sensitivity Knob
- 3 Operating Modes: DMX, Stand Alone, and Master/Slave

The Tri Image™ carries a 90 day limited warranty. Please fill out the enclosed warranty card to validate your purchase. All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. If the unit is under warranty you must provide a copy of your proof of purchase invoice. Please contact American DJ® customer support for a R.A. number.



- To reduce the risk of electrical shock or fire, do not expose this unit rain or moisture.
- Do not spill water or other liquids into or on to your unit.
- Do not attempt to remove or break off the ground prong from the electrical cord. This prong is used to reduce the risk of electrical shock and fire in case of an internal short. Do not attempt to operate this unit if the power cord has been frayed or broken.
- Disconnect from main power before making any type of connection.
- Do not remove the cover under any conditions. There are no user serviceable parts inside.
- Always be sure to mount this unit in an area that will allow proper ventilation. Allow about 6" (15cm) between this device and a wall.
- Do not attempt to operate this unit, if it becomes damaged.
- This unit is intended for indoor use only, use of this product outdoors voids all warranties.
- During long periods of non-use, disconnect the unit's main power.
- Always mount this unit in safe and stable matter.
- Power cords should be routed so they are not likely to be walked on, pinched by items placed upon or against them.
- Cleaning -The fixture should be cleaned only as recommended by the manufacturer. See page 12 for cleaning details.
- Heat -The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- The fixture should be serviced by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged.
 - B. Objects have fallen, or liquid has been spilled into the unit.
 - C. The unit has been exposed to rain or water.
 - D. The unit does not appear to operate normally or exhibits a marked change in performance.



1. Dipswitches - These switches serve two functions. In master-slave mode these switches are used to assign a specific head address. In DMX mode these switches are used to assign a DMX address to the unit. In DMX mode each switch corresponds to a specific value based on binary code. See page 7 for a detailed explanation of DMX binary code.

2. Audio Sensitivity Knob - This adjust audio sensitivity of the internal microphone. Turning the sensitivity knob in the clockwise direction will increase the sensitivity to sound. Turning the knob in the counter clockwise direction will decrease the fixture's sensitivity to sound. If the knob is turned completely in the counter-clockwise direction the sound sensitivity function will turn off.

3. DC Input - Accepts a DC 9V, 500 mA minimum, power supply.

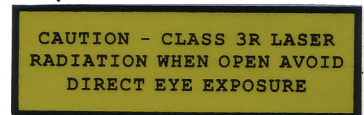
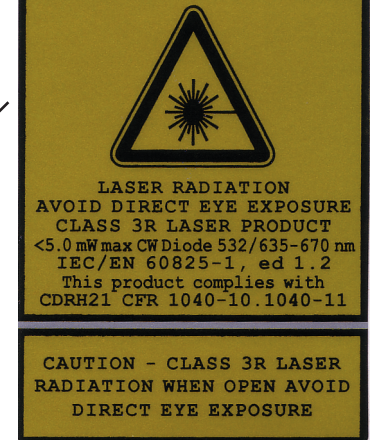
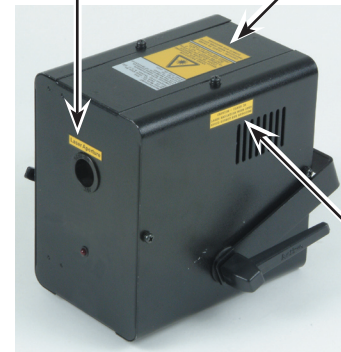
4. Power Switch - Switches the power on or off.

5. XLR Output Jack - This jack is used to transmit the incoming DMX signal to another DMX fixture, or transmit a Master/Slave signal to the next Tri Image™ in the chain. For best results in DMX or Master/Slave mode terminate this jack if it is the last unit in the chain. See "Terminator" on page 9.

6. XLR Input Jack - This jack is used to accept an incoming DMX signal or Master/Slave signal.

Manufactured:
Actor Mate Co., Ltd.
NO.15, lane 83, Lung shou St.,
Taoyuan city, Taiwan, R.O.C. 330
Complies with performance
standards for laser products
with the exception of deviation
pursuant to laser
Notice NO. 50,
dated July 26, 2001

Laser Aperture



Power Supply: Before plugging your unit in, be sure the source voltage in your area matches the required voltage for your American DJ® Tri Image.™ The American DJ® Tri Image™ is 120v only. Because line voltage may vary from venue to venue, you should be sure your unit voltages matches the wall outlet voltage before attempting to operate you fixture.

DMX-512: *DMX is short for Digital Multiplex. This is a universal protocol used as a form of communication between intelligent fixtures and controllers.* A DMX controller sends DMX data instructions from the controller to the fixture. DMX data is sent as serial data that travels from fixture to fixture via the DATA “IN” and DATA “OUT” XLR terminals located on all DMX fixtures (most controllers only have a DATA “OUT” terminal).

DMX Linking: DMX is a language allowing all makes and models of different manufactures to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. *To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest cable path possible. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned a DMX address of 1 may be placed anywhere in a DMX line, at the beginning, at the end, or anywhere in the middle. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that unit, no matter where it is located in the DMX chain.*

Dipswitches in DMX mode: This unit uses dipswitches to assign a DMX address. Each dipswitch represents a binary value.

Dipswitch 1 address equals 1
 Dipswitch 2 address equals 2
 Dipswitch 3 address equals 4
 Dipswitch 4 address equals 8
 Dipswitch 5 address equals 16
 Dipswitch 6 address equals 32
 Dipswitch 7 address equals 64
 Dipswitch 8 address equals 128
 Dipswitch 9 address equals 256

Dipswitch 10 - Some units omit dipswitch 10. When a unit does include dipswitch #10, it is usually used for special functions such as

sound activation.

Assigning DMX Address: Each dipswitch has a preset value. A specific DMX address is set by combining the dipswitches that sum your desired value. For example: To achieve a DMX address of 7, combine dipswitches 1, 2, and 3. Since dipswitch 1 has a value of 1, dipswitch 2 has a value of 2, and dipswitch 3 has a value of 4, the combination of the three create a DMX value of 7. (See example below).

Set DMX address 1:

Dip-switches # 1 = 1

Set DMX address 7:

Dip-switches # 1 = 1
 2 = 2
 3 = 4
 = 7

Data Cable (DMX Cable) Requirements (For DMX and Master/Slave Operation): The Tri Image™ can be controlled via DMX-512 protocol. The Tri Image™ is a two channel DMX unit. The DMX address is set on the side panel of the Tri Image.™ Your unit and your DMX controller require a standard 3-pin XLR connector for data input and data output. If you are making your own cables, be sure to use standard two conductor shielded cable (This cable may be purchased at almost all pro sound and lighting stores). Your cables should be made with a male and female XLR connector on either end of the cable. Also remember that DMX cable must be daisy chained and can not be split.

Notice: Be sure to follow figures one and two when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable’s shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR’s outer casing. Grounding the shield could cause a short circuit and erratic behavior.

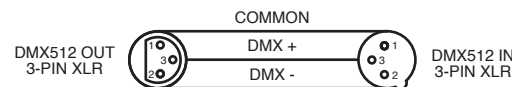


Figure 1

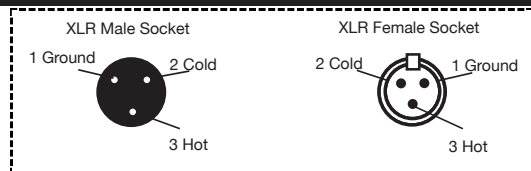


Figure 2

XLR Pin Configuration	
Pin 1 =	Ground
Pin 2 =	Data Compliment (negative)
Pin 3 =	Data True (positive)

Special Note: Line Termination. When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behavior. A terminator is a 90-120 ohm 1/4 watt resistor which is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This unit is inserted in the female XLR socket of the last unit in your daisy chain to terminate the line. Using a cable terminator (ADJ part number Z-DMX/T) will decrease the possibilities of erratic behavior.



Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal. (Resistance 120 Ohm 1/4 W) between PIN 2 (DMX-) and PIN 3 (DMX+) of the last fixture.

Figure 3

5-Pin XLR DMX Connectors. Some manufactures use 5-pin XLR connectors for DATA transmission in place of 3-pin. 5-pin XLR fixtures may be implemented in a 3-pin XLR DMX line. When inserting standard 5-pin XLR connectors in to a 3-pin line a cable adaptor must be used, these adaptors are readily available at most electric stores. The chart below details a proper cable conversion.

3-Pin XLR to 5-Pin XLR Conversion		
Conductor	3-Pin XLR Female (Out)	5-Pin XLR Male (In)
Ground/Shield	Pin 1	Pin 1
Data Compliment (- signal)	Pin 2	Pin 2
Data True (+ signal)	Pin 3	Pin 3
Not Used		Pin 4 - Do Not Use
Not Used		Pin 5 - Do Not Use

Power Supply: This unit is available only in 120v. Before plugging your unit in be sure the source voltage in your area matches the required voltage for your American DJ® Tri Image.™

General Operation: This fixture is designed to operate as a stand alone, sound-active unit, or in a Master/Slave configuration. It can also operate via DMX controller. The Tri Image™ is ready to be plugged in out of the box. After plugging the power supply into a power outlet the lasers will immediately begin to cycle through the many built in patterns (provided all dipswitch are in the “OFF” position, and there is an ample amount of sound to trigger the unit). You can also flip dipswitch #10 to the “ON” poition to activate the Auto Mode. The unit comes with several built-in patterns that automatically cycle through when the unit is operating.

Sensitivity Knob: A sound sensitivity knob is located on the rear of the unit. Use this knob to regulate the amount of sound it takes to trigger the unit. Turning the knob in a clockwise direction will increase the units sensitivity to sound, turning the knob in a counterclockwise direction will decrease the units sensitivity. Turning the knob completely to the counter-clockwise direction will turn off the sound-active mode.

Operating Modes:

Universal DMX Control: This mode allows you to use a universal DMX-512 controller such as the American DJ® DMX Operator™ or Show Designer.™

1. To control your fixture in DMX mode, follow the set-up procedures on pages 6 - 8 as well as the set-up procedures included with your DMX controller.
2. For longer cable runs (more than a 100 feet) use a terminator on the last fixture.
3. Assign a DMX address to the unit by following the dipswitch chart on page 14.
4. The Tri Image™ uses two DMX channels. See page 13 for detailed description of the DMX traits. Use your DMX controller to activate the various built-in patterns.
5. For help operating in DMX mode consult the manual included with your DMX controller.

NOTE: If running in Master/Slave configuration while using a DMX controller, the Master unit should have all dipswitches set to the “OFF” position. All slave units should have dipswitch #1 set to the “ON” position.

Stand-Alone Operation (Sound Active): This mode allows a single unit to run to the beat of the music. Only use this mode when running a single unit, or when running several units as individuals.

1. Set all dipswitches to the “OFF” position to activate Stand-Alone.
2. The unit will react to the low frequencies of music via the internal microphone.
3. Use the audio sensitivity knob on the back of the unit to make the unit more or less sensitive to sound. Turning the sensitivity knob in the clockwise direction will increase the sensitivity, turning the knob in the counter-clockwise direction will decrease the fixture's sensitivity to sound.

Master-Slave Operation (Sound Active): This mode will allow you to link up to 16 units together and operate without a controller. In Master-Slave mode, the units will react to sound. In Master-Slave operation one unit will act as the controlling unit and the others will react to the controlling units programs. Any unit can act as a Master or as a Slave.

1. Using standard XLR microphone cables, daisy chain your units together via the XLR connector on the rear of the units. Remember the Male XLR connector is the input and the Female XLR connector is the output. For longer cable runs we suggest a terminator at the last fixture.
2. Choose a unit to function as the Master and set dipswitch #11 to the “ON” position. This unit must be the first unit in line. Then simply daisy chain the units together using XLR cables.
3. Turn dipswitch #1 to the “ON” position on the SLAVE units, and they will react the same as the MASTER.
4. Use the sensitivity knob on the back of the master unit to make it more or less sensitive to sound.

Fixture Cleaning: Due to fog residue, smoke, and dust cleaning the internal and external lenses should be carried out periodically to optimize light output.

1. Use normal glass cleaner and a soft cloth to wipe down the outside casing.
2. Clean the external optics with glass cleaner and a soft cloth every 20 days.
3. Always be sure to dry all parts completely before plugging the unit back in.

Cleaning frequency depends on the environment in which the fixture operates (i.e. smoke, fog residue, dust, dew). In heavy use we recommend cleaning on a monthly basis. Periodic cleaning will ensure longevity, and crisp beam output.

O = ON

X = OFF

DIPSWITCH CHART												FUNCTION
1	2	3	4	5	6	7	8	9	10	11	12	
X	X	X	X	X	X	X	X	X	X	X	X	SOUND ACTIVE
X	X	X	X	X	X	X	X	X	O	X	X	AUTO MODE
SET TO SOUND/AUTO MODE										O	X	MASTER
O	X	X	X	X	X	X	X	X	X	X	X	SLAVE
SET DMX ADDRESS										X	X	DMX MODE
X	X	X	X	X	X	X	X	X	X	X	O	TEST MODE

Tri Image™		DMX Traits
Channel	Value	Function
1 ↓	0 - 255	<u>PATTERN SELECTION</u>
	0 - 3	OFF
	4 - 203	PATTERNS 1- 50
	204 - 220	SOUND ACTIVE
	221 - 255	PATTERNS CHANGE EVERY 10 SEC.
2 ↓	0 - 255	<u>COLORS AND LINE SELECTION</u>
	0	OFF
	1 - 13	RED LINE
	14 - 26	GREEN LINE
	27 - 39	YELLOW LINE
	40 - 52	RED DOTTED LINE 1
	53 - 65	GREEN DOTTED LINE 1
	66 - 78	YELLOW DOTTED LINE 1
	79 - 91	RED + GREEN LINE
	92 - 104	RED DOTTED LINE 2
	105 - 117	GREEN DOTTED LINE 2
	118 - 130	YELLOW DOTTED LINE 2
	131 - 143	RED + GREEN LINE 2
	144 - 156	RED + YELLOW LINE 2
	157 - 169	GREEN + YELLOW LINE 2
	170 - 182	RED + GREEN + YELLOW DOTTED LINE
	183 - 195	RED + GREEN + YELLOW LINE 1
	196 - 208	RED + GREEN + YELLOW LINE 2
	209 - 232	COLOR AND LINES CHANGE EVERY 3 SEC.
	233 - 255	COLOR AND LINES CHANGE EVERY 5 SEC.

Tri Image™ DMX Address Chart

This chart list the DMX dipswitch setting for DMX address 1 through 511. Follow the instructions below to configure fixture dipswitches with your desired DMX address.

DMX Address Quick Reference Chart

DIP SWITCHES					Dip Switch Position																			
DMX DIP Switch Settings X = OFF O = ON					#9	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O
					#8	X	X	X	X	O	O	O	O	X	X	X	X	O	O	O	O	O	O	O
					#7	X	X	O	O	X	X	O	O	X	X	O	O	X	X	O	O	X	X	O
					#6	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	O
#1	#2	#3	#4	#5																				
X	X	X	X	X		3	64	96	128	160	192	224	256	288	320	352	384	416	448	480				
O	X	X	X	X	1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481				
X	O	X	X	X	2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482				
O	O	X	X	X	3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483				
X	X	O	X	X	4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484				
O	X	O	X	X	5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485				
X	O	O	X	X	6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486				
O	O	O	X	X	7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487				
X	X	X	O	X	8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488				
O	X	X	O	X	9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489				
X	O	X	O	X	10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490				
O	O	X	O	X	11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491				
X	X	O	O	X	12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492				
O	X	O	O	X	13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493				
X	O	O	O	X	14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494				
O	X	O	O	X	15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495				
X	X	X	X	O	16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496				
O	X	X	X	O	17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497				
X	O	X	X	O	18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498				
O	O	X	X	O	19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499				
X	X	O	X	O	20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500				
O	X	O	X	O	21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501				
X	O	O	X	O	22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502				
O	O	O	X	O	23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503				
X	X	X	O	O	24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504				
O	X	X	O	O	25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505				
X	O	X	O	O	26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506				
O	O	X	O	O	27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507				
X	X	O	O	O	28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508				
O	X	O	O	O	29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509				
X	O	O	O	O	30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510				
O	O	O	O	O	31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511				

The center numbers of this chart (1-511) represent a DMX address. The "X"'s and "O"'s along the top and side of the chart represent dip switch position ("X" for off and "O" for on). Find your desired DMX address from the center chart. Identify the position for dip switches 1-5 from the chart on the left and dip switches 6-9 from the chart on the top. Adjust the dip switches on your fixture to match the position settings of the chart. For fixtures with 10 dip switches; dip switch 10 is reserved for special functions.

90 DAY LIMITED WARRANTY

A. American DJ® hereby warrants, to the original purchaser, American DJ® products to be free of manufacturing defects in material and workmanship for a period of 90 days from the date of purchase. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.

B. For warranty service, send the product only to the American DJ® factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, American DJ® will pay return shipping charges only to a designated point within the United States. If the entire instrument is sent, it must be shipped in its original package. No accessories should be shipped with the product. If any accessories are shipped with the product, American DJ® shall have no liability whatsoever for loss of or damage to any such accessories, nor for the safe return thereof.

C. This warranty is void if the serial number has been altered or removed; if the product is modified in any manner which American DJ® concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the American DJ® factory unless prior written authorization was issued to purchaser by American DJ®; if the product is damaged because not properly maintained as set forth in the instruction manual.

D. This is not a service contract, and this warranty does not include maintenance, cleaning or periodic check-up. During the period specified above, American DJ® will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of American DJ® under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of American DJ®. All products covered by this warranty were manufactured after January 1, 1990, and bear identifying marks to that effect.

E. American DJ® reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured.

F. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products described above. Except to the extent prohibited by applicable law, all implied warranties made by American DJ® in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired. The consumer's and or Dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall American DJ® be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product.

G. This warranty is the only written warranty applicable to American DJ® Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

H. All lamps and fuses are not covered under this warranty.

Model: Tri Image™

Voltage*:	120v~60Hz
Lasers:	4.9mW Red and Green Diodes
Dimensions:	5.5" (H) x 4.7" (W) x 19.6" (L)
Weight:	8.8 Lbs. (4kg)
Duty Cycle:	None
Warranty:	90 Days

**Voltage is preset at the factory and can not be changed by the user.*

Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

©American DJ®

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